

a display for displaying information registered with the substrate based on the decoded embedded data.

2. (Twice Amended) A method for displaying registered information using embedded data, comprising:

capturing an image of a substrate having visible data and embedded data embodied thereon, wherein said embedded data is non-orthogonal to the visible data; and displaying information registered with the substrate based on the decoded embedded data.

#### REMARKS

The Examiner's Official Action dated November 30, 2001 has been received and its content carefully noted. Claims 1-6 were pending prior to this amendment. This amendment amends independent claims 1 and 2. Consequently, claims 1-6 are currently pending in the present application. The above amendment with the following remarks is submitted to be fully responsive to the Official Action. Reconsideration of this application in light of these remarks, and allowance of this application are respectfully requested.

In paragraph 2 of the Official Action, claims 1 and 2 are rejected under 35 U.S.C. §112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner alleges that "[t]he limitations citing 'embedded asymmetric [sic] data' are render[ed] indefinite. . ." Applicants have therefore removed all references to asymmetric data. It is respectfully asserted that claims 1 and

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2 are no longer indefinite. Therefore, the rejection of claims 1 and 2 under 35 U.S.C. §112 as indefinite should be withdrawn.

In paragraph 3 of the Official Action, claims 1-6 are rejected under 35 U.S.C. §102(e) as anticipated by U.S. Patent No. 6,122,403 to Rhoads (hereinafter, Rhoads).

According to the Examiner:

Rhoads "teaches a computer 942 generating a master snowy image 972 which is added to a raw image 970 to produce a unique image which is printed onto a personal cash card 950. The master snowy image 972 of the unique image is obscured. Authenticating the card 950 may be done on a scanning system by decoding the image and displaying the decoded image on a local computer screen.

(November 30, 2001 Official Action, quoting Rhoads at col. 60, line 64-col. 64, line 23.)

Anticipation under 35 U.S.C. §102 requires that each and every claim limitation is disclosed by the applied reference. Rhoads does not teach each and every claim limitation of claims 1-2, and therefore, as a matter of law, cannot anticipate these claims. That is, Rhoads does not teach at least a substrate having visible data and embedded data embodied thereon, wherein said embedded data is non-orthogonal to the visible data. In fact, Rhoads teaches away from the use of similar embedded data when it provides that:

[i]t should be clearly pointed out . . . that placing in additional orthogonal patterns into the image can significantly increase the overall system. (Orthogonal means that, if a given pattern is multiplied by another orthogonal pattern, the resulting number is zero, where "multiplication of patterns" is meant in the sense of vector dot products; these are all familiar terms and concepts in the art of digital processing).

(Rhoads at col. 6, lines 21-22.) Rhoads further provides that the "computer generates [a] master snowy image which is generally orthogonal to [the] original image" (Id. at Figure 24.) In essence, Rhoads teaches embedded data that is orthogonal to the original image. The orthogonal

nature of the embedded data is used by a card reader and central processor to verify the authenticity of the original image. (See e.g., Rhoads at col. 62, lines 6-61.)

The present invention as recited in claims 1-6 is directed to a method and apparatus which includes displaying registered information using embedded data. Claim 1 specifically comprises an image capture device for capturing an image of a substrate having visible data and embedded data embodied thereon, wherein said embedded data is non-orthogonal to the visible data; a decoder for decoding the embedded data; and a display for displaying information registered with the substrate based on the decoded embedded data.

Anticipation under 35 U.S.C. §102 requires that each and every claim limitation is disclosed by the applied reference. Rhoads does not teach each and every claim limitation of claims 1-6, and therefore, as a matter of law, cannot anticipate these claims. That is, Rhoads does not teach at least a substrate having visible data and embedded data embodied thereon, wherein said embedded data is non-orthogonal to the visible data. Therefore, the rejection of claims 1 and 2 under 35 U.S.C. §102(e) as anticipated by Rhoads should be withdrawn. Accordingly, reconsideration of the rejection of claims 3-6 under 35 U.S.C. §102(e) is in order and respectfully requested.

Applicants respectfully requests that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1-6 in condition for allowance. Applicants submit that the proposed amendments to claims 1 and 2 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims examined. Therefore, this Amendment should allow for immediate action by the Examiner.

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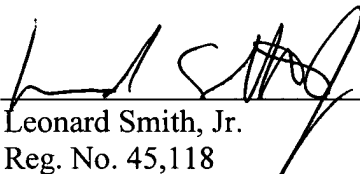
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Finally, Applicants submit that the entry of the Amendment would place the application in better form for appeal, should the Examiner continue to dispute the patentability of the pending claims.

Applicants, therefore, request the entry of this Amendment, the Examiner's reconsideration of the application, and the timely allowance of the pending claims.

If any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this response, and not requested by attachment, such extension is hereby requested. If there are any fees due under 37 C.F.R. § 1.16 or 1.17 that are not enclosed, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge those fees to our Deposit Account No. 06-0916.

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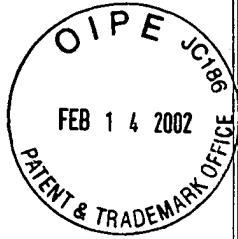
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Dated: February 14, 2002

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APPENDIX TO AMENDMENT OF NOVEMBER 30, 2001



1. (Twice Amended) An apparatus for displaying registered information using embedded data, comprising:
  - an image capture device for capturing an image of a substrate having visible data and embedded [asymmetric] data embodied thereon, wherein said embedded data is non-orthogonal to the visible data;
  - a decoder for decoding the embedded data; and
  - a display for displaying information registered with the substrate based on the decoded embedded data.
  
2. (Twice Amended) A method for displaying registered information using embedded data, comprising:
  - capturing an image of a substrate having visible data and embedded [asymmetric] data embodied thereon, wherein said embedded data is non-orthogonal to the visible data; and
  - displaying information registered with the substrate based on the decoded embedded data.

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